Kendrick, Bret

From: Humphrey, Marvelyn

Sent: Wednesday, August 31, 2016 7:13 PM

To: Allen, Bob (PCS)

Cc: Kendrick, Bret; latrice.babin@pcs.hctx.net

Subject: Highland Private Wells - Data Review Reports - 7-7-16 and 7-8-16 Resample Events

Attachments: Data Review Report 7-7-16 Resample Event.pdf; DST_7-7-16 Resample_WO#532975.xlsx;

Data Review Report 7-8-16 Resample Event.pdf; DST_7-8-16 Resample_WO#533065.xlsx;

Revised DR Reports 7-5-15 Resample Event.pdf; DST_7-5-16 Resample - ALS -

WO#E1600665.xlsx; DST_7-5-16 Resample- Xenco -WO#532785.xlsx

Bob,

We have completed the review of all of the data from the Highlands Private Wells Project.

Please find attached the remaining data review reports (7-7-16 and 7-8-16 resample events).

Also attached are excel spreadsheets of the validated lab results and the revised reports of the 7-5-16 resample event.

Do not hesitate to contact me if you have any questions.

Marvelyn

Marvelyn Humphrey

Chief, Lab Support & External Oversight Section Environmental Services Branch US EPA Region 6 Laboratory 10625 Fallstone Road

Houston, TX 77099 office: 281-983-2140

humphrey.marvelyn@epa.gov

ATTACHMENT

(Data Review Report – August 31, 2016 for Wells resampled on July 7, 2016)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 ENVIRONMENTAL SERVICES BRANCH 10625 FALLSTONE ROAD HOUSTON, TX 77099-4303

August 31, 2016

Mr. Bob Allen Director Harris County Pollution Control Services Department John Phelps Courthouse Annex 4 101 South Richey, Suite H Pasadena, TX 77506

Dear Mr. Allen:

The Environmental Services Assistance Team (ESAT), contractor to EPA Region 6 Environmental Services Branch, completed the review of the data from Xenco Laboratory for the Highlands Private Wells. The assessment of the data from the July 7, 2016 resample event is found in the enclosed data review report. If you have any questions regarding the data review report, please contact me at 281-983-2140.

Sincerely,

Marvelyn Humphrey

Chief, Laboratory Support

and External Oversight Section

Enclosure:

Data Review Report

cc: Bret Kendrick

Superfund Project Manager

Risk and Site Assessment Section

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6 10625 Fallstone Road Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE:

August 29, 2016

TO:

Marvelyn Humphrey, ESAT PO, Region 6 EPA

FROM:

Ying-Ping Hsieh, Data Reviewer, ESAT MH

THRU:

Dominic G. Jarecki, ESAT Program Manager, ESAT $0b^{\circ}$

SUBJECT:

Data Review

Contract No.:

EP-W-13-026

TO No.:

002

Task/Sub-Task:

2-13 1602-213-0013

ESAT Doc. No.:

6-16-297A

TDF No.: ESAT File No.:

0-1343

Attached is the data review summary for:

Site <u>Highlands Private Wells</u> Date of Sampling 7/7/2016

WO # 532975

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 HOUSTON BRANCH

10625 FALLSTONE ROAD

HOUSTON, TEXAS 77099

ORGANIC REGIONAL DATA ASSESSMENT

Date of San	mpling _ 7/7/2 0	16 SITE Hi	.ghlands Privat	e Wells
WO #	532975	NO. OF SA	MPLES	23
LABORATORY	XENCO	MATRIX		Water
CONTRACT#	N/A	REVIEWER	(IF NOT ESB)	ESAT
#WOR	Method 1613B	REVIEWER'	S NAME Ying	y-Ping Hsieh
Site ID#	A6NM	COMPLETIC	N DATE Augu	ıst 29, 2016
SAMPLE NO.	ES16010-008R	ES16010-033R	ES16010-056R	ES16010-09 0 R
	ES16010-009R	ES16010-034R	ES16010-057R	ES16010-095R
	ES16010-010R	ES16010-040R	ES16010-059R	ES16010-099R
	ES16010-017R	ES16010-042R	ES16010-062R	DUP-11
4	ES16010-027R	ES16010-049R	ES16010-082R	DUP-12
	ES16010-031R	ES16010-055R	ES16010-084R	

DATA ASSESSMENT SUMMARY

Dioxin/Furan

2. 3.	HOLDING TIMES GC/MS TUNE/INSTR. PERFORM. CALIBRATIONS BLANKS	0 0
5.	LABEL COMP./CLEANUP STD. RECOVERY	0
7.	MATRIX SPIKE/DUPLICATE/LCS/OPR OTHER QC	$\frac{O}{N/A}$
	INTERNAL STANDARDS COMPOUND ID/QUANTITATION	0
	PERFORMANCE/COMPLETENESS OVERALL ASSESSMENT	0_

O = Data had no problems.
M = Data qualified because of major or minor problems.
Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS REGION 6 QA REVIEW

Date of Sampling 7/7/2016 WO # 532975 SITE Highlands Private Wells LAB XENCO

COMMENTS: This data package consisted of 23 water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results are acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

Percent Difference &D Percent Relative Standard Deviation %RSD Aroclors ARO BFB 4-Bromofluorobenzene Base/Neutral and Acid BNA CCS Contract Compliance Screening Continuing Calibration Verification CCV CF Calibration Factor CRQL Contract Required Quantitation Limit CSF Complete SDG File DCB Decachlorobiphenyl DFTPP Decafluorotriphenylphosphine DMC Deuterated Monitoring Compound DST Data Summary Table EDM EXES Data Manager GC/ECD Gas Chromatograph/Electron Capture Detector Gas Chromatograph/Mass Spectrometer GC/MS GPC Gel Permeation Chromatography IC Initial Calibration Individual Standard Mixture A(or B or C) INDA(B,C) IS Internal Standard LCS Laboratory Control Sample LMVOA Low/Medium Volatile Organic Analysis Matrix Spike/Matrix Spike Duplicate MS/MSD NFG National Functional Guidelines OTR/COC Organic Traffic Report/Chain of Custody Polynuclear Aromatic Hydrocarbon PAH PE Performance Evaluation PEM Performance Evaluation Mixture PEST Pesticides Quality Assurance OA -QC Quality Control QL . Quantitation Limit RIC Reconstructed Ion Chromatogram RPD Relative Percent Difference RRF Relative Response Factor RRT Relative Retention Time RSCC Regional Sample Control Center RTRetention Time S3VEM Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review) S4VEM Stage 4 Validation Electronic and Manual (previously called Standard Review) SDG Sample Delivery Group SDMC Semivolatile Deuterated Monitoring Compound SIM Selected Ion Monitoring SMO Sample Management Office Statement of Work SOW SQL Sample Quantitation Limit SVOA Semivolatile Organic Analysis TCL Target Compound List TCX Tetrachloro-m-xylene TIC Tentatively Identified Compound Trace Volatile Organic Analysis AOVT VDMC Volatile Deuterated Monitoring Compound VOA **V**olatile Organic Analysis

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE:

Case Number

SDG:

SDG Number

EPASAMP:

EPA Sample Number

LABID:

Laboratory File/Sample ID

MATRIX:

Sample Matrix

ANDATE:

Sample Analysis Date

ANTIME:

Sample Analysis Time

SPLEWT:

Sample Weight

FINALVOL:

Final Sample Extract Volume

CASNUM:

Compound CAS Number

ANALYTE:

Compound Name

CONC:

Compound Concentration

VALDOAL:

Region 6 Organic Data Validation Qualifier (see Organic Data Qualifier Definitions on the next page)

UNITS:

Concentration Units

EMPC:

Estimated Maximum Possible Concentration

EDL:

Estimated Detection Limit

ADJMRL:

Adjusted method reporting limit value

SMPDATE:

Sampling Date

STATLOC:

Station Location

ESAT verified the accuracy of the information reported Disclaimer: in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRQL. data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- A High biased. Actual concentration may be lower than the concentration reported.
- Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- **UJ** Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

	ļ		i																
		2,3,2,8-7000	1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxCDD	1,2,3,47,8-1исор	1,2,3,7,8,9-4scDB	1,2,3,4,6,7,8-1lnCDD	Octachlorodlbenzo-p-dioxio (OCDD)	2,3,7,8-Tetracklorodibescofura	1,2,3,7,8-PaCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-18иСDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpcDF	1,2,3,4,7,8,9-HpCDF	Octachlorodibenzofusan {OCD\$}	fotalTEQ
Sample ID	Date	pg/L	pg/L	pg/L	pg/L	pg/L	pg/l	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/l	pg/l	pg/L	pg/L
Residential	GW/GW _{ing}	30	30	300	300	300	3000 ;	100000	300	1000	100	300	300	300	300	3000	3000	100000	30
Toxicity Equivalency Fa	actor (TEF)	2.00	1.00	0.10	0.10	0.10	0.01	0.0003	5.10	0.03	0.30	0.10	0.10	0.10	0,10	0.01	0.01	D,D003	
ES16010-008R 7	7/7/2016	<0.151	<0.172	<0.316	<0.308	0.296 L J	<0.698	<3.59	©.149	<0.355	<0.3Z	<0,221	<0.329	<1.01	<0.269	<0.505	<0.42	<1.36	0.57
E516010-009R 7	7/7/2016	<0.249	<0.231	<0.113	<0.109	<0.193	<0.525	<0.87	<0.178	0.433 L3	<0.0921	<0.161	<0.0875	<0.807	<0.206	<0.159	<0.12	<0.861	0.44
ES16010-DIDR 7	7/7/2016	<0.372	0.347 LJ	<0.238	<0.115	0.376 LJ	<0.486	<1.41	<0.157	<0.539	<0.245	<0.119	<0.21	<0.905	<0.227	<0.364	<0.545	<0.544	1.04
ES16010-017R 7	7/7/2015	<0.199	<0.282	<0.17	<0.38	D.221 t.J	<0.453	<0.893	<0.194	<0.56	<0.182	<0.159	<0.24	<0.759	<0,155	<0.43	<0,315	<0,479	0.54
ES16010-027R 7	7/7/2016	<0.315	0.912 LJ	<0.194	<0.198	0.401 L J	<0.707	<1.35	0.149 LJ	<0.386	<0.209	<0,173	<0.185	<0.837	<0.321	<0.408	<0.372	<0.621	0.96
ES16010-031R 7	7/7/2015	<0.156	<0.53	<0.238	<0.254	<0.173	<1.14:	<8.44	<0.187	<0.113	<0.114	<0.107	<0.2	<0,728	<0.296	<0.294	<0.286	<0.704	0.84
ES16010-033R 7	7/7/2016	<0.213	<0.462	<0.185	<0.179	<0.305	<0.77	<2.76	<0.229	<0.348	<0.231	<0.276	<0.117	<0.782	<0.188	<0.377	<0.378	<0.83	0.86
ES16010-034R 7	7/7/2016	<0.146	<0.181	<0.138	<0.152	<0.2	<0.347	<4.52	<0.151	<0.439	<0.171	<0.262	<0.227	<0.949	<0.0922	<0.35	<0.347	<0.693	0.44
ES16010-040R 7	7/7/2016	<0.293	<0.77	<0.157	<0.246	<0.171	<0.734	<3.17	0,331 L f	0.575 1, 1	<0.249	<0.226	<0.176	<0.974	<0.449	<0.266	<0.238	<1.27	1.30
ES16010-042R 7	7/7/2016	<0.279	<0.463	<0.543	<0.257	<0.192	<0.826	<1.57	<0.209	<0.55	<0.357	<0.257	<0.257	<1.22	<0.323	<0.508	<0.655	<0.779	1.05
DUP-11 7	7/7/2016	<0.262	<0.214	<0.122	<0.115	<0.195	<0.277	<1.97	0.2961,1	0.282 L)	<0.107	<0,103	<0.173	<0.903	<0.104	<0.234	<0.128	<0.826	0.47
ES16010-049R 7	7/7/2016	<0_205	0.267 LJ	<0.16	<0.119	<0.122	<0.752	<1.39	<0.115	<0.531	<0.277	<0.186	<0.161	<0.612	<0.256	<0.335	<0.253	<0.441	0.74
ES16010-055R 7	7/7/2016	<0.397	<0.215	<0.173	<0.278	0.192 L J	<0.865	<6.45	<0.166	<0.55	<0.357	<0.132	<0.195	<0.941	<0.229	<0.346	<0.5\$4	<0.773	0.87
E516010-056R								L											
7	7/7/2016	<0.128	<0.352	<0.151	<0.2	0.281 LJ	<0.518	<1.11	<0.117	<0,45	<0.25	<0.072	<0.141	⊲0.755	<0.17	<0.356	<0.243	<0.618	0.4Z
ES16010-057R 7	7/7/2016	<0.275	<0.251	<0.138	<0.129	<0.131	<0.573	<1.72	0.217 L J	0.63 []	<0.0975	<0.205	<0.214	<0.965	<0.172	<0.0414	<0.327	<1.17	0.52
ES16010-DS9R 7	7/7/2016	0.23313	<d.209< td=""><td><0.236</td><td><0.297</td><td><0,352</td><td><1.1</td><td><1.45</td><td>0.215 L J</td><td><0,0927</td><td><0.204</td><td><0.301</td><td><0.187</td><td><0.959</td><td><0.352</td><td><0.419</td><td><0.518</td><td><0.964</td><td>0.71</td></d.209<>	<0.236	<0.297	<0,352	<1.1	<1.45	0.215 L J	<0,0927	<0.204	<0.301	<0.187	<0.959	<0.352	<0.419	<0.518	<0.964	0.71
E516010-062R 7	7/7/2016	0.536 L J	<0.696	<0.535	<0.496	<0.425	<1.08	<1.94	<0.165	<0.951	<0.769	-0.636	<0.543	<1.47	<0.71	<0,534	<1.08	<1.15	2,02
ES16010-082R 7	7/7/2016	<0.149	0.371 LJ	<0.168	<0.165	0.191 LJ	<0.573	<1.81	<0.199	<0.314	<0.102	<0,273	<0.204	<0.709	<9.167	<0.34	<0.268	<0.629	0.56
ES16010-084R 7	7/7/2016	0.334 L J	<0.239	<0.236	<0,136	<0.143	<0.656	<1.5	0.31 (.)	<0.255	<0.128	<0.18	<0.0889	<0.845	<0.209	<0.343	<0.308	<0.54	0.71
E516010-090R 7	7/7/2016	<0.206	<0.262	<0.271	<0.219	<0.372	<0.735	<7.65	<0.206	<0.138	<0.189	<0.212	<0.181	<0.943	<0.196	<0.409	<0.312	<0.745	0.56
ES16010-095R 7	7/7/2016	1.1808.0	<0.62	<0.321	<0.156	<0.483	<0.784	80,6>	<0.186	<0.474	<0.344	<0.132	<0.173	<0.941	<0.185	<0.17	<0.321	<0.894	1.31
E516010-099R 7	7/7/2016	<0.285	<0.232	40.188	<0.131	<0.21	<0.517	<0.819	<0.215	0.277 LJ	<0.0963	<0.183	<0.0957	<0.717	<0.0934	<0.163	<0.291	<0.267	0.45
DUP-12 7	7/7/2016	<0.195	40.165	<0.0881	<0.0833	<0.114	<0.307	<0.924	<0.138	0.245 L J	<0.298	<0.141	<0.127	<0.544	<0.0668	<0.158	<0.205	<0.446	0.40

Notes:

<: Analyte was not detected at or above the reported sample detection limit</p>

L: Analyte was not detected at the concentration less than the method reporting limit

J: Estimated value

TEQ; Toxicity Equivalency Quotient

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

WO#	<u>532975</u>	Date of Sampling	<u>7/7/16</u>	SDG Nos. To Follow	Mod. Ref No.	Date Rec.	<u>8 /12/16</u>

EPA Lab ID: XENCO	ORIGINALS	YES	NO	N/A
Lab Location: Stafford, TX	CUSTODY SEALS			
Region: 6 Audit No.: 532975 (7/7/16)	1. Present on package?			х
Re_Submitted CSF? Yes No X	2. Intact upon receipt?			Х
Box No(s): 1	FORM DC-2			
COMMENTS:	3. Numbering scheme accurate?			х
	4. Are enclosed documents listed?			х
	5. Are listed documents enclosed?			Х
	FORM DC-1			
	6. Present?			Х
•	7. Complete?			х
	8. Accurate?			х
	TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)	,		
	9. Signed?	Х		
	10. Dated?	Х		
	AIRBILLS/AIRBILL STICKER			,,
•	11. Present?			X
	12. Signed?			Х
the state of the s	13. Dated?			X
	SAMPLE TAGS			
	14. Does DC-1 list tags as being included?			Х
	15. Present?			Х
•	OTHER DOCUMENTS			
	16. Complete?	Х		
	17. Legible?	Х		
	18. Original?		Х	
Over for additional comments.	18a. If "NO", does the copy indicate where original documents are located?	х		
Audited by:	Ying-Ping Hsich / ESAT Data Reviewer	Date	8/23/	16
Audited by:		Date		

Signature Printed Name/Title

DC-2__



Setting the Standard since 1990 Stafford, Texas (281-240-4200)

Dallas, Texas (214-902-0300)

CHAIN OF CUSTODY

Page 1 o 3

Odessa, Texas (432-563-1800)

Lakeland, Florida (663-545-8526)

Norcross, Georgia (770-449-8800)

Tampa, Florida (813-620-2000)

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TAT Starts	Day received by Lab, if received by 3	1:00 pm	 	······································							-						FED-E	X/UPS	Y Trac	king #		 				_
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CHAIN OF CUSTODY

Setting the Standard since 1990 Stafford,Texas (281-240-4200)

Dallas, Texas (214-902-0300)

Odesan, Texas (432-563-1800)

Lakeland, Florida (863-846-8526)

Norcross Georgia (770-449-8800)

Tampa, Floride (813-820-2000)

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Email:	Phone No.) ;	Invoice 1		M.	ARC	cN			••••											•	SW = Surface water SL = Sludge WW= Waste Water	
Project Contact:	M. MARCIN		PO Num	oer:											£	*						W = Wipe O = Oil	
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CHAIN OF CUSTODY

Page 3 of 3

Setting the Standard since 1990 Stafford, Texas (281-240-4200)

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Norcross Georgia (770-449-8800)

Tampa, Florida (813-620-2000)

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ATTACHMENT

(Data Review Report – August 31, 2016 for Wells resampled on July 8, 2016)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 ENVIRONMENTAL SERVICES BRANCH 10625 FALLSTONE ROAD HOUSTON, TX 77099-4303

August 31, 2016

Mr. Bob Allen Director Harris County Pollution Control Services Department John Phelps Courthouse Annex 4 101 South Richey, Suite H Pasadena, TX 77506

Dear Mr. Allen:

The Environmental Services Assistance Team (ESAT), contractor to EPA Region 6 Environmental Services Branch, completed the review of the data from Xenco Laboratory for the Highlands Private Wells. The assessment of the data from the July 8, 2016 resample event is found in the enclosed data review report. If you have any questions regarding the data review report, please contact me at 281-983-2140.

Sincerely,

Marvelyn Humphrey

Chief, Laboratory Support

and External Oversight Section

Enclosure:

Data Review Report

cc: Bret Kendrick

Superfund Project Manager

Risk and Site Assessment Section

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6 10625 Fallstone Road Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE:

August 29, 2016

TO:

Marvelyn Humphrey, ESAT PO, Region 6 EPA

FROM:

Wallace Doong, Data Reviewer, ESAT $\searrow^{\mathcal{O}}$

THRU:

Dominic G. Jarecki, ESAT Program Manager, ESAT 1067

SUBJECT:

Data Review

Contract No.:

EP-W-13-026

TO No.:

002

Task/Sub-Task:

2-13 1602-213-0012

ESAT Doc. No.:

6-16-298A

TDF No.:

ESAT File No.:

0-1345

Attached is the data review summary for:

Site Highlands Private Wells Date of Sampling 7/8/2016

WO # 533065

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

HOUSTON BRANCH

10625 FALLSTONE ROAD HOUSTON, TEXAS 77099

ORGANIC REGIONAL DATA ASSESSMENT

Date of Samp	oling _ 7/8/2016	SITE Highlands Private Wells
WO #	533065	NO. OF SAMPLES 4
LABORATORY	XENCO	MATRIX Water
CONTRACT#	N/A	REVIEWER (IF NOT ESB) ESAT
SOW# M	lethod 1613B	REVIEWER'S NAME Wallace Doong
Site ID#	A6NM	COMPLETION DATE August 29, 2016
,		
SAMPLE NO.	ES16010-029R	
	ES16010-064R	
	ES16010-089R	
	ES16010-098R	
•		· · · · · · · · · · · · · · · · · · ·

DATA ASSESSMENT SUMMARY

Dioxin/Furan

2. 3. 4. 5.	HOLDING TIMES GC/MS TUNE/INSTR. PERFORM. CALIBRATIONS BLANKS LABEL COMP./CLEANUP STD. RECOVERY	0 0 0 0
6.	MATRIX SPIKE/DUPLICATE/LCS/OPR	0_
7.	OTHER QC	N/A
8.	INTERNAL STANDARDS	O
9.	COMPOUND ID/QUANTITATION	0_
10.	PERFORMANCE/COMPLETENESS	0
11.	OVERALL ASSESSMENT	0_

O = Data had no problems.
M = Data qualified because of major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS REGION 6 QA REVIEW

Date of Sampling 7/8/2016 WO # 533065 SITE Highlands Private Wells LAB XENCO_

COMMENTS: This data package consisted of four water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results are acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

Percent Difference %D %RSD Percent Relative Standard Deviation ARO Aroclors 4-Bromofluorobenzene BFB BNA Base/Neutral and Acid CCS Contract Compliance Screening CCV Continuing Calibration Verification CF Calibration Factor CRQL Contract Required Quantitation Limit CSF Complete SDG File DCB Decachlorobiphenyl DFTPP Decafluorotriphenylphosphine DMC Deuterated Monitoring Compound DST Data Summary Table EDM EXES Data Manager GC/ECD Gas Chromatograph/Electron Capture Detector GC/MS Gas Chromatograph/Mass Spectrometer GPC Gel Permeation Chromatography IC Initial Calibration INDA(B,C) Individual Standard Mixture A(or B or C) IS Internal Standard Laboratory Control Sample LCS LMVOA Low/Medium Volatile Organic Analysis MS/MSD Matrix Spike/Matrix Spike Duplicate NFG National Functional Guidelines OTR/COC Organic Traffic Report/Chain of Custody Polynuclear Aromatic Hydrocarbon PAH Performance Evaluation PEPEM Performance Evaluation Mixture PEST Pesticides Quality Assurance QA. QC Quality Control QL Quantitation Limit RIC Reconstructed Ion Chromatogram RPD Relative Percent Difference RRFRelative Response Factor RRT Relative Retention Time RSCC Regional Sample Control Center RT Retention Time S3VEM Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review) S4VEM Stage 4 Validation Electronic and Manual (previously called Standard Review) SDG Sample Delivery Group SDMC Semivolatile Deuterated Monitoring Compound SIM Selected Ion Monitoring SMO · Sample Management Office Statement of Work SOW SQL Sample Quantitation Limit SVOA Semivolatile Organic Analysis TCL. Target Compound List TCX Tetrachloro-m-xylene TIC Tentatively Identified Compound TVOA Trace Volatile Organic Analysis VDMC Volatile Deuterated Monitoring Compound

Volatile Organic Analysis

VOA

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE:

Case Number

SDG:

SDG Number

EPASAMP:

EPA Sample Number

LABID:

Laboratory File/Sample ID

MATRIX:

Sample Matrix

ANDATE:

Sample Analysis Date

ANTIME:

Sample Analysis Time

SPLEWT:

Sample Weight

FINALVOL:

Final Sample Extract Volume

CASNUM:

Compound CAS Number

ANALYTE:

Compound Name

CONC:

Compound Concentration

VALDQAL:

Region 6 Organic Data Validation Qualifier (see

Organic Data Qualifier Definitions on the next page)

UNITS:

Concentration Units

EMPC:

Estimated Maximum Possible Concentration

EDL:

Estimated Detection Limit

ADJMRL:

Adjusted method reporting limit value

SMPDATE:

Sampling Date

STATLOC:

Station Location

ESAT verified the accuracy of the information reported Disclaimer: in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRQL. data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- ^ High biased. Actual concentration may be lower than the concentration reported.
- Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- UJ Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

		2,3,7,8-1CDD	1,2,47,8-PecoD	1,2,3,6,7,8-HxCDD	1,23,6,7,8-HxCod	1,2,3,7,8,9-HxCdd	2,2,3,4,6,7,8-1(pC0D	Octachloradibenzo-p-dloxin (OCDD)	2,3,7,8-Tetrachlorodibenzofura	1,2,3,7,8-PeCDF	2,3,47,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HkCDF	4,2,3,7,8,9-HxCDF	2,3,4,6,7,8-thcdf	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	Ocíachlorodibenzofuran (OCDF)	TotalTEQ
Sample ID	Date	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/l	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
Residential	GWGW _{ing}	30	30	300	300	300	3000	100000	300	1000	100	300	300	300	300	3000	3000	100000	30
Toxicity Equivalence	cy Factor (TEF)	1.00	1.00	0.10	0.10	0.10	0.01	0.0003	0.10	0.03	0.30	0.10	0.10	0.10	0.10	0.01	0.01	0.0003	
ES16010-029R	7/8/2016	<0.242	<0.228	<0.152	<0.11	<0.464	<0.502	<1.34	<0.176	0.12 LJ	<0.317	<0.302	<0.101	<0.904	<0.165	<0.385	<0.318	<0.776	0.68
ES16010-064R	7/8/2016	<0.242	<0.334	<0.222	<0.107	<0.118	<0.533	<1.19	<0.156	0.485 LJ	<0.0942	<0.243	<0.236	<0.539	<0.0871	<0.315	<0.275	<0.583	0.67
ES16010-089R	7/8/2016	<0.233	<0.206	<0.167	<0.171	<0.589	<0.781	<1.42	<0.148	: <0.0729	<0.468	<0.195	<0.279	<0.793	<0.303	<0.101	<0.526	<0.883	0.75
ES16010-098R	7/8/2016	<0.354	<0.244	<0.141	<0.0972	<0.101	<0.159	<0.976	<0.165	0.267 LJ	<0.0903	<0.0739	<0.227	<0.654	<0.0747	<0.211	<0.137	<0.142	0.75

Notes:

Analyte was not detected at or above the reported sample detection limit

Li Analyte was detected at the concentration less than the method reporting limit

J: Estimated value

TEQ: Toxicity Equivalency Quotient

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Date of 7/8/16 Sampling WO# SDG Nos. To Follow Mod. Ref No. 8/12/16 533065 Date Rec.

			***************************************			1	
EPA Lab ID:	XENCO			ORIGINALS	YES	NO	N/A
Lab Location:	Stafford, TX			CUSTODY SEALS			
Region:	6 Audit No.:	533065 (7/8/16)		1. Present on package?	ļ		X
Re_Submitted C	CSF? Yes	No	Х	2. Intact upon receipt?			Х
Box No(s):	1			FORM DC-2			T
COMMENTS:				3. Numbering scheme accurate?			X
				4. Are enclosed documents listed?	'		Х
				5. Are listed documents enclosed?			Х
				FORM DC-1			1
				6. Present?			х
				7. Complete?			Х
			•	8. Accurate?			Х
				TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)			
				9. Signed?	x		
				10. Dated?	X		
				AIRBILLS/AIRBILL STICKER			Ţ.,
				11. Present? 12. Signed?			X
				13. Dated?			X
				SAMPLE TAGS			-
				14. Does DC-1 list tags as being included?			$ _{\mathbf{x}}$
				15. Present?			1
				OTHER DOCUMENTS			X
				16. Complete?	X		
				17. Legible?	Х		†
				18. Original?		x	1
Over for addition	al comments.			18a. If "NO", does the copy indicate where original documents are located?	Х		
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Audited by: /	1 - Luc cuc				Date		
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	17. Legiole;	^		
	18. Original?		х	
Over for additional comments.	18a. If "NO", does the copy indicate where original documents are located?	Х		
Audited by: Mullacy During	Wallace Doong / ESAT Data Reviewer	Date	8/23/16	
Audited by:		Date		
Signature	Printed Name/Title			
•				



Stafford, Texas (281-240-4200)

Dallas, Texas (214-902-0300)

CHAIN OF CUSTODY

Page 1 Of 1

Odessa, Texas (432-563-1800)

Lakeland, Florida (863-646-8526)

Norcross, Georgia (770-449-8800)

Tampa, Florida (813-620-2000)

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Col	npany Addr	ess					Proje	ect Loc	itlan:	- ```	P C - 12-5.		***************************************																GW -Ground Water
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Page 6 of 573

Final 1.001

ATTACHMENT

(Revised Data Review Reports – August 31, 2016 for Wells resampled on July 5, 2016)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 ENVIRONMENTAL SERVICES BRANCH 10625 FALLSTONE ROAD HOUSTON, TX 77099-4303

August 31, 2016

Mr. Bob Allen Director Harris County Pollution Control Services Department John Phelps Courthouse Annex 4 101 South Richey, Suite H Pasadena, TX 77506

Dear Mr. Allen:

Enclosed are the revised data review reports of the Highland Private Wells July 5, 2016 resampling events. The reports were revised to include the date of resampling and to update the project number of the Xenco Laboratories report. The project number of the Xenco report was changed from ES16010 to 532785. In addition, the data review summary tables were reformatted. No other changes were made.

If you have any questions regarding the reports, please contact me at (281) 983-2140.

Sincerely.

Marvelyn Humphrey

Chief, Laboratory Support and Oversight Section

Enclosure:

Data Review Reports (2)

cc:Bret Kendrick Superfund Project Manager Risk and Site Assessment Section

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6 10625 Fallstone Road Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE:

August 26, 2016

TO:

Marvelyn Humphrey, ESAT PO, Region 6 EPA

FROM:

Wallace Doong, Data Reviewer, ESAT 1/

THRU:

Dominic G. Jarecki, ESAT Program Manager, ESAT 1963

SUBJECT:

Data Review

Contract No.:

EP-W-13-026

TO No.:

002 2-13

Task/Sub-Task:

1602-213-0011

ESAT Doc. No.: TDF No.:

6-16-274A/6-16-300A

ESAT File No.:

0-1337

Attached is the data review summary for:

Site <u>Highlands Private Wells</u> Date of Sampling 7/5/2016

WO # 532785

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

HOUSTON BRANCH

10625 FALLSTONE ROAD

HOUSTON, TEXAS 77099 ORGANIC REGIONAL DATA ASSESSMENT

Date of Samp	oling7/5/2016	SITE	Highlands	Private	Wells
WO #	532785	NO. OF	SAMPLES	5	
LABORATORY	XENCO	MATRIX		₩a	ter
CONTRACT#	N/A	REVIEWE	R (IF NOT	ESB) ES	AT_
SOW# M	Method 16 1 3B	REVIEWE	R'S NAME	Wallac	e Doong
Site ID#	A6NM	COMPLET	ION DATE	August	26, 2016
SAMPLE NO.	ES16010-012R ES16010-056R ES16010-071R ES16010-091R	ES1601	0-093R_		

DATA ASSESSMENT SUMMARY

Dioxin/Furan

1.	HOLDING TIMES	0_
2.	GC/MS TUNE/INSTR. PERFORM.	0_
3,	CALIBRATIONS	0_
4.	BLANKS	0
	LABEL COMP./CLEANUP STD. RECOVERY	0
6.	MATRIX SPIKE/DUPLICATE/LCS/OPR	0
7.	OTHER QC	N/A
8.	INTERNAL STANDARDS	_0_
9.	COMPOUND ID/QUANTITATION	0_
10.	PERFORMANCE/COMPLETENESS	0
11.	OVERALL ASSESSMENT	0

O = Data had no problems.

M = Data qualified because of major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS REGION 6 QA REVIEW

Date of Sampling $\frac{7/5/2016}{\text{LAB}}$ WO # $\frac{532785}{\text{XENCO}}$ SITE Highlands Private Wells

COMMENTS: This data package consisted of five water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results are acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

Percent Difference %D Percent Relative Standard Deviation %RSD ARO Aroclors 4-Bromofluorobenzene BFB Base/Neutral and Acid BNA CCS Contract Compliance Screening Continuing Calibration Verification CCV CF Calibration Factor Contract Required Quantitation Limit CROL Complete SDG File CSF DCB Decachlorobiphenyl DFTPP Decafluorotriphenylphosphine DMC Deuterated Monitoring Compound DST Data Summary Table EXES Data Manager Gas Chromatograph/Electron Capture Detector GC/ECD GC/MS Gas Chromatograph/Mass Spectrometer Gel Permeation Chromatography GPC Initial Calibration IC Individual Standard Mixture A(or B or C) INDA(B,C) Internal Standard IS LCS Laboratory Control Sample Low/Medium Volatile Organic Analysis LMVOA MS/MSD Matrix Spike/Matrix Spike Duplicate NFG National Functional Guidelines OTR/COC Organic Traffic Report/Chain of Custody PAH Polynuclear Aromatic Hydrocarbon Performance Evaluation Яď PEM Performance Evaluation Mixture PEST Pesticides OA. Quality Assurance QC Quality Control QL Quantitation Limit RIC Reconstructed Ion Chromatogram RPD Relative Percent Difference Relative Response Factor RRF RRT Relative Retention Time Regional Sample Control Center RSCC Retention Time RTS3VEM Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review) S4VEM Stage 4 Validation Electronic and Manual (previously called Standard Review) SDG Sample Delivery Group SDMC Semivolatile Deuterated Monitoring Compound SIM Selected Ion Monitoring SMO Sample Management Office Statement of Work SOW SQL Sample Quantitation Limit SVOA Semivolatile Organic Analysis TCL Target Compound List TCX Tetrachloro-m-xylene TIC Tentatively Identified Compound TVOA Trace Volatile Organic Analysis VDMC Volatile Deuterated Monitoring Compound

Volatile Organic Analysis

VOA

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE:

Case Number

SDG:

SDG Number

EPASAMP:

· EPA Sample Number

LABID:

Laboratory File/Sample ID

MATRIX:

Sample Matrix

ANDATE:

Sample Analysis Date

ANTIME:

Sample Analysis Time

SPLEWT:

Sample Weight

FINALVOL:

Final Sample Extract Volume

CASNUM:

Compound CAS Number

ANALYTE:

Compound Name

CONC:

Compound Concentration

VALDQAL:

Region 6 Organic Data Validation Qualifier (see

Organic Data Qualifier Definitions on the next page)

UNITS:

Concentration Units

EMPC:

Estimated Maximum Possible Concentration

EDL:

Estimated Detection Limit

ADJMRL:

Adjusted method reporting limit value

SMPDATE:

Sampling Date

STATLOC:

Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRQL. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- Actual concentration may be lower than the concentration reported.
- Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- UJ Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.



(L80584 SU65733

Sample SUB-Contract#: 1035434

Page 1 of 1

Date	T)	
LIMIT	PHH	12.7

07.07.2016 18:14

Date/Time:

07.05.2016 14:23

Created by: Tanya Torres

Send report to: Debbie Simmons

Subcontractor:

Eurofins Eaton Analytical, Inc.

Address:

4147 Greenbriar Dr.

PO#:

532785

Phone:

Stafford, TX 77477

Delivery Priority:

Air Bill No.:

E-Mail:

debbie.simmons@xenco.com

Invoice To:

apInvoices@xenco.com; subcontract@xenco.com; debbie.simmons@xenco.com

Due Date:

07.12.2016

Sample ld	Client Sample Id	Cont#	Matrix	070716 Cl Sample Collection	2,45 Method	Method Name	Lab PM
532785-002	ES16010-012R	5950	W	_07/08/16 09:55	E1613	Dioxins & Furans by EPA 1613	Debbie Simmons
£20795 002	ESICOTO DELL	0.01		07/00/10 11/00	V1613	District of the state of the st	Scoole Samuel Co.
522705 004		3772	-				Debbie Simmons
522705.005	marcore and	-	-	07/00/10 1044		No. 2	Debete Simmions
522785 00C	E016014-05670	-5054		00/00/14/20/15	F1613	Dioxins & Furans, by EPA 1613	Dabling
580705-006	- 10:00:00 0.Jok	9333	w	07/05/16 12:45	T505.2	SVOCS by EPA 525.2	Debbie Simus

SDAY Turn needed. Full List PCDO'S/PCDF'S
Replacement for bloke Sample **SUB-Contracting Comments:** 8 Received By: Relinquished By: Mike Kimmel Date/ Time Relinquished: _07/05/2016 Date/ Time Received: Relinquished By: Date/ Time Received: Date/ Time Relinquished: Cooler Temperature:

> XNL04 Page 11 of 413 Page 6 of 8

CHAIN OF CUSTODY

Setting the Standard since 1990 Stafford, Texes (281-240-4200)

Odessa, Texas (432-563-1800)

Lakeland, Florida (863-646-8525)

Dailes, Texas (214-902-0300)		Norcross, Georgia (779-449-8800) Tampa, Florida (813-520-2000)
Service Center - San Antonio, Texas (210-509-3334)	www.xenco.com	Xenco Quote # Xanco Job # 5
		Analytical information Matrix Codes
Client / Reporting Information	Project information	
Company Name / Branch: INCONTROL TECH	Project Name/Number: HIGHUANDS Project Location:	A= Ait S = Scil/Sed/Solid
Company Address:		GW ≕Ground Water DW ≠ Drinking Water
14731 Rebble Bunds Email: Phone No:	HIGHLANDS, TEXAS	P = Product SW = Surface water
mmarcon@inconfrolteet.com	LI ICT	SI, ≈ Studge WW≃ Waste Water
Project Contact:	PO Number:	W = Wipe O = Oil
Samplers's Name: Michael Marcon		
The state of the s	Magazi urcrasane ruchies //	30 < ` \
No. Field (D / Point of Collection	5. 7	XOA Fleid Comments
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1 ES16010-085R	7-5 9228DW 2 2	X
2 ES16010-812R	7-5 9:55 1 6 4 1	X
3 ESHLOVO - OTA R	7-51[100 1 1	
4 ES16010-693-R	7-511170	X
5 ESI6010- D918	7-512:10	<u> </u>
6 ESIGO 10-05GER	7-512:45 \ 3 2 3	
7		
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9 -		
10 Turnaround Time (Business days)	Data Deliverable Informetion	Notes:
Same Day TAT 💢 5 Day TAT	Level IV Std QC Level IV (Full Data Pi	(g/Rew data)
Next Day EMERGENCY 7 Day TAT	Lavel III Std QC+ Forms TRAP Lavel IV	
2 Day EMERGENCY Contract TAT	Level 3 (CLP Forms) UST/RG-411	
3 Day EMERGENCY	TRAP Checklist	
TAT Starts Day received by Lab, if received by 3:00		FED-EX / UP\$: Tracking #
	US SE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING CO TO Timo: Received By: / Relinquished By: //	Date Timo: Figure
1/11/11/11/11	7/5/28/6 1865 / / / 2 // / / / / / / / / / / / / / /	Date Time: Received By Date Time: Received By
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Reinquished by:	re Time: Received By: Custody Seal #	Preserved where applicable On lea Cooler Temp. Thermo. Corr. Pactor 5 - 0 % 5 - 3 %
Notice: Signature of this document and reformishment of samples constitutes a va-	d durchese order from ellent company to XENGO Laboratories and its affiliates, subconfractors and a	ssigns XENCO's standard terms and conditions of service unless previously negicitized under a fully executed effort contract.

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

WO# <u>532785</u> Date of Sampling SDG Nos. To Follow Mod. Ref No. ___ 7/5/16 Date Rec. 7/26/16

EPA Lab ID:	XENCO			ORIGINALS	YES	NO	N/A
Lab Location:	Stafford, TX			CUSTODY SEALS			
Region:	6 Audit No.:	532785 (7/5/16)		1. Present on package?			x
Re_Submitted (CSF? Yes	No	Х	2. Intact upon receipt?			Х
Box No(s):	1			FORM DC-2			
COMMENTS:				3. Numbering scheme accurate?			Х
				4. Are enclosed documents listed?			Х
				5. Are listed documents enclosed?			Х
				FORM DC-1			
				6. Present?			Х
				7. Complete?			х
				8. Accurate?			х
				TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)			
•				9. Signed?	х		
				10. Dated?	Х		
				AIRBILLS/AIRBILL STICKER 11. Present?			х
				12. Signed?			х
				13, Dated?			Х
				SAMPLE TAGS 14. Does DC-1 list tags as being included?			х
				15. Present?			х
				OTHER DOCUMENTS 16. Complete?	Х	sen.	
				17. Legible?	Х		
				18. Original?		Х	
Over for addition	al comments.			18a. If "NO", does the copy indicate where original documents are located?	Х		
Audited by:	Willau	Goore/		Wallace Doong / ESAT Data Reviewer	Date	7/27/	16
Audited by:		ð			Date		

Audited by:	Albellau Doone	Wallace Doong / ESAT Data Reviewer	Date	7/27/16
Audited by:	0 8		Date	
	Signature	Printed Name/Title		

DC-2__

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

		2,3,7,6-1CDD	1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxC0D	1,2,3,47,8-HKCUD	1,2,3,7,8,9-HxC0D	1,2,3,4,6,7,8-HpcpD	Octachlorodibenzo-p-dloxín (OCDD)	2,3,7,8-Tetrachlorodibenzofura	1,2,3,7,8-PeCOF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HKCDF	1,7,3,6,7,8+HKOF	1,7.3,7,8,9-HKCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpC0F	Octacliorodibenzofuran (OCDF)	Fotal TEQ
Sample ID	Date	pg/L	pg/Ł	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/l	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
Residential	^{bW} GW _{ing}	30	30	300	300	300	3000	100000	300	1000	100	300	300	300	300	3000	3000	100000	30
Toxicity Equivale:	ncy Factor (TEF)	1.00	1.00	0.10	0.10	0.10	0.01	0.0003	0.10	0.03	0.30	0.10	0.10	0.10	0.10	0.01	0.01	0.0003	
ES16010-012R	7/7/2016	<0.352	<0.277	<0.145	<0.145	<0.152	<0.913	<0.906	<0.241	<0.111	<0.209	<0.145	<0.246	<0.68	<0.157	<0.331	<0.356	<0.499	0.73
ES16010-056R	7/5/2016	<0,302	40.804	<0.664	<0.5	<0.357	<1.17	<1.93	<0.299	<0.717	<0.978	<0.331	<0.618	<2.26	<0.662	<0.806	<0.822	<1.3	1.75
ES16010-071R	7/5/2016	<0,369	<0.395	<0.234	<0.212	<0,231	<0.693	<2.37	<0,386	<0.413	<0.293	<0.352	<0.358	<0.582	<0.327	<0.403	<0.274	<0.843	0.72
ES16010-091R	7/5/2016	<0.566	<0.367	<0.242	<0.249	<0.254	<1.79	<9.85	<0.331	<0.339	<0.288	<0.167	<0.175	<0.506	<0.177	<0.343	<0.282	<0.919	1.20
ES16010-093R	7/5/2016	<0.418	<0.407	<0.409	<0.456	<0.355	<0.864	<2.45	<0.473	<0.688	<0.546	<0.475	<0.154	<0.836	<0.257	<0.6	<0.225	<0.99	0.95

Notes:

<: Analyte was not detected at or above the reported sample detection limit</p>

Li Analyte was detected at the concentration less than the method reporting limit

J: Estimated value

TEQ: Toxicity Equivalency Quotient

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6 10625 Fallstone Road Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE:

August 26, 2016

TO:

Marvelyn Humphrey, ESAT PO, Region 6 EPA

FROM:

Wallace Doong, Data Reviewer, ESAT, \mathcal{V}

THRU:

Dominic G. Jarecki, ESAT Program Manager, ESAT $\rho_{\mathfrak{Z}}$

SUBJECT:

Data Review

Contract No.:

EP-W-13-026

TO No.:

002

Task/Sub-Task:

2-13 1602-213-0010

ESAT Doc. No.:

6-16-259A/6-16-300A

TDF No.:

0-1334

ESAT File No.:

.

Attached is the data review summary for:

Site <u>Highlands Private Wells</u>
Date of Sampling 7/5/2016

WO # E1600665

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

HOUSTON BRANCH

10625 FALLSTONE ROAD

HOUSTON, TEXAS 77099

ORGANIC REGIONAL DATA ASSESSMENT

Date of Sampling 7/5/2016 WO # E1600665	SITE Highlands Private Wells NO. OF SAMPLES 4	
LABORATORY ALS	MATRIX Water	
CONTRACT# N/A	REVIEWER (IF NOT ESB) ESAT	
SOW# Method 1613B	REVIEWER'S NAME Wallace Doong	
Site ID# A6NM	COMPLETION DATE August 26, 201	6
SAMPLE NO. ES16010-012D ES16010-071D ES16010-091D ES16010-093D		

DATA ASSESSMENT SUMMARY

Dioxin/Furan

1.	HOLDING TIMES	0
2.	GC/MS TUNE/INSTR. PERFORM.	0
3.	CALIBRATIONS	0_
4.	BLANKS	0_
5.	LABEL COMP./CLEANUP STD. RECOVERY	0
б.	MATRIX SPIKE/DUPLICATE/LCS	0
7.	OTHER QC	N/A
8.	INTERNAL STANDARDS	_0_
9.	COMPOUND ID/QUANTITATION	0
10.	PERFORMANCE/COMPLETENESS	0_
1 1.	OVERALL ASSESSMENT	0

- O = Data had no problems.
- M = Data qualified because of major or minor problems.
- Z = Data unacceptable.
- NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS REGION 6 QA REVIEW

Date of Sampling 7/5/2016 WO # E1600665 SITE Highlands Private Wells LAB ALS

COMMENTS: This data package consisted of four water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results were acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

Percent Difference &D %RSD Percent Relative Standard Deviation Aroclors ARO 4-Bromofluorobenzene BFB Base/Neutral and Acid BNA CCS Contract Compliance Screening CCV Continuing Calibration Verification CF Calibration Factor CRQL Contract Required Quantitation Limit CSF Complete SDG File DCB Decachlorobiphenyl DFTPP Decafluorotriphenylphosphine DMC Deuterated Monitoring Compound DST Data Summary Table EDM EXES Data Manager Gas Chromatograph/Electron Capture Detector GC/ECD GC/MS Gas Chromatograph/Mass Spectrometer GPC Gel Permeation Chromatography Initial Calibration INDA(B,C) Individual Standard Mixture A(or B or C) IS Internal Standard Laboratory Control Sample LCS Low/Medium Volatile Organic Analysis LMVOA Matrix Spike/Matrix Spike Duplicate MS/MSD NFG National Functional Guidelines OTR/COC Organic Traffic Report/Chain of Custody Polynuclear Aromatic Hydrocarbon PAH PEPerformance Evaluation PEM Performance Evaluation Mixture Pesticides PEST Quality Assurance QA Quality Control QC Quantitation Limit QЪ Reconstructed Ion Chromatogram RIC RPD Relative Percent Difference RRF Relative Response Factor Relative Retention Time RRT RSCC Regional Sample Control Center RTRetention Time Stage 3 Validation Electronic and Manual (previously called S3VEM Modified CADRE Review) Stage 4 Validation Electronic and Manual (previously called S4VEM Standard Review) SDG Sample Delivery Group Semivolatile Deuterated Monitoring Compound SDMC SIM Selected Ion Monitoring SMO Sample Management Office SOW Statement of Work SQL Sample Quantitation Limit Semivolatile Organic Analysis AOVR Target Compound List TCLTCX Tetrachloro-m-xylene Tentatively Identified Compound TIC TVOA Trace Volatile Organic Analysis Volatile Deuterated Monitoring Compound VDMC

Volatile Organic Analysis

VOA

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE:

Case Number

SDG:

SDG Number

EPASAMP:

EPA Sample Number

LABID:

Laboratory File/Sample ID

MATRIX:

Sample Matrix

ANDATE:

Sample Analysis Date

ANTIME:

Sample Analysis Time

SPLEWT:

Sample Weight

FINALVOL:

Final Sample Extract Volume

CASNUM:

Compound CAS Number

ANALYTE:

Compound Name

CONC:

Compound Concentration

VALDQAL:

Region 6 Organic Data Validation Qualifier (see

Organic Data Qualifier Definitions on the next page)

UNITS:

Concentration Units

EMPC:

Estimated Maximum Possible Concentration

EDL:

Estimated Detection Limit

ADJMRL:

Adjusted method reporting limit value

SMPDATE:

Sampling Date

STATLOC:

Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRQL. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- Actual concentration may be lower than the concentration reported.
- Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- UJ Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

		43,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxCdD	1,2,3,4,7,8-HKCDD	1,2,3,7,8,9-HxC0D	<i>ֈֈ</i> Ⴧֈ <i>ֈ</i> ֈֈֈֈֈ	Octachlorodlbenzo-p-dloxin (OCDO)	2,3,7,8-Tetrachlorodibenzofura	1,2,3,7,8-PeCDF	\$3.47.8-Pecde	\$,2,3,4,7,8-HKCOF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	4,3,4,6,7,8-14kCDF	1,2,3,4,6,7,8-Hpcof	ኒጲ.ℨ.ሊ.ፖ.ጸ.Զ-HpCDF	Octachlorodlbenzofuran (OCOF)	rotal TEQ
Sample ID	Date	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
Residential	^{GW} GW _{m€}	30	30	300	300	300	3000	100000	300	1000	100	300	300	300	300	3000	3000	100000	30
Toxicity Equivaler		1.00	1.00	0.10	0.10	0.10	0.01	0,0003	0.10	0.03	0.30	0.10	0.10	0.10	0.10	0,01	0.01	6,0003	
ES16010-012D	7/5/2016	<2,24	<5.66	6.78 L J	<6.74	<5.74	<13.8	<44.2	<1.67	<5.01	<7.61	<6.92	<3.97	<5.74	<5.6	<6.94	6.01 LJ	12.3 LJ	13.60
ES16010-071D	7/5/2016	<2.54	<0.959	<0.323	<0.33	<0.307	<8.84	<44.7	<1.97	<0.785	<0.768	<0.528	<0.597	<0.731	<0.523	<1_87	<0.449	7.01 L J	0.12
ES16010-091D	7/5/2016	<2.18	<0.953	<0.538	<0.565	<0.517	<6.19	<36.9	<1.34	<0.71	<0.656	<0.513	<0.488	<0,572	<0.486	<1.73	<0.87	4.8 L J	0.09
ES16010-093D	7/5/2016	<1.35	<1.77	<1.36	<1.33	<1.26	<7.45	<36.5	<0.996	<1.66	<1.66	<1.28	<1.19	<1.45	<1,27	<1.66	<2.53	3.54 L J	0.09

Notes:

<: Analyte was not detected at or above the reported sample detection limit L: Analyte was detected at the concentration less then the method reporting limit

J: Estimated value

TEQ: Toxicity Equivalency Quotient

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

WO#	E1600665	Date of	7/5/16	SDG Nos. To Follow	Mod. Ref No.	Date Rec.	7/18/16
		Sampling		V.			-

EPA Lab ID:	ALS					ORIGINALS	YES	NO	N/A
Lab Location:						CUSTODY SEALS			
Region:	6	Audit No.:	E1600665 (7/	5/16)		1. Present on package?			x
Re_Submitted (omitted CSF? Yes No X				X	2. Intact upon receipt?			х
Box No(s):	1			•		FORM DC-2			
COMMENTS:			***************************************			3. Numbering scheme accurate?			Х
						4. Are enclosed documents listed?			Х
		-			i	5. Are listed documents enclosed?			х
						FORM DC-1			
						6. Present?			X
						7. Complete?			X
·						8. Accurate?			Х
						TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)			
						9. Signed?	X	ļ	
						10. Dated?	Х		
,					_	AIRBILLS/AIRBILL STICKER			
						11. Present?			x
						12. Signed?			Х
						13. Dated?			Х
						SAMPLE TAGS			
						14. Does DC-1 list tags as being included?			Х
						15. Present?			Х
						OTHER DOCUMENTS			
						16. Complete?	Х		
						17. Legible?	Х		
						18. Original?		Х	
Over for addition	nal com	ments,				18a. If "NO", does the copy indicate where original documents are located?	Х		
Audited by: Millacil 2000						Wallace Doong / ESAT Data Reviewer	Date	7/18	/16
Audited by:	U		******	χ	-		Date	-	

Audited by:	Millaciforns	Wallace Doong / ESAT Data Reviewer	Date	7/18/16	
Audited by:	X		Date		
•	Signature	Printed Name/Title			

DC-2__

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